



USGS Update on Landsat and Sustainable Land Imaging

National Geospatial Advisory Committee

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Landsat Operations Status

Landsat 9 (2021 -)

Collecting more than 700 new scenes per day; full mission transitioned to USGS in 2022

Landsat 8 (2013 -)

Collecting more than 700 new scenes per day; watching potential solar array drive issue; longevity concerns

Landsat 7 (1999 -)

Lowered into storage orbit; awaiting NASA satellite rendezvous and refueling; still collecting new imagery



Earth Resources Observation and Science Center (EROS)

Landsat Archive Operations

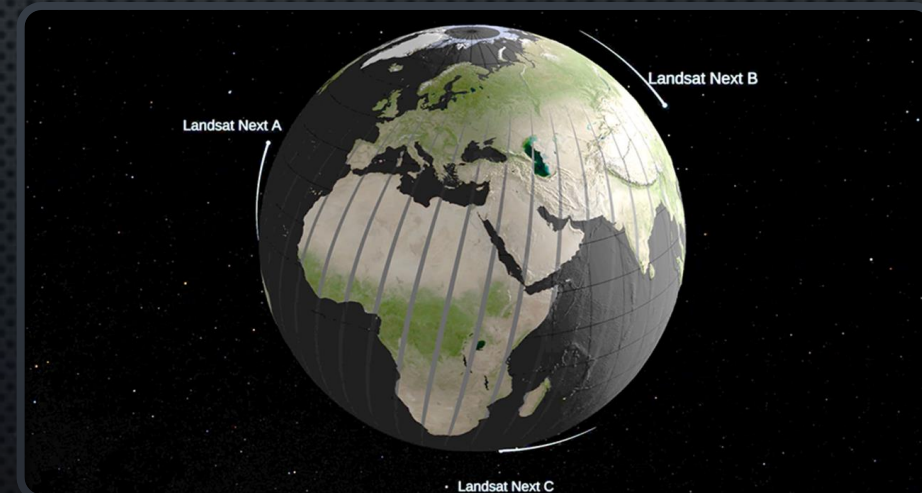
Reprocessed Landsat "Collection 2" available on the Amazon Cloud.

On track for nearly **20 billion** user accesses this year!

Landsat Next

- **Landsat Next “Superspectral Triplets” mission concept** will provide a completely new next-generation Landsat, meeting the users’ needs for richer spectral information and improved spatial and temporal resolution.
 - **Improved revisit frequency** to support applications requiring ~weekly clear views, such as crop health & productivity, water quality, snow/ice state, wildfire
 - **Higher spatial resolution** (10/20-meter data for VSWIR and 60-meter for TIR) to support monitoring of small agricultural fields, forest disturbance, urbanization, and other applications
 - **Additional spectral bands** to support emerging applications in water quality, snow hydrology, soil mapping, and other areas; improve atmospheric correction and surface temperature retrieval
 - **Maintaining radiometric quality** established by Landsat 8/9
- NASA and USGS Landsat Next project teams are on track for instrument award in early 2024, spacecraft bus award in late 2024, and launch projected for late 2030

Landsat Next will provide more than twice as many spectral bands as Landsat 8/9, with spatial resolution improved by a factor of 2, and significantly improved repeat coverage

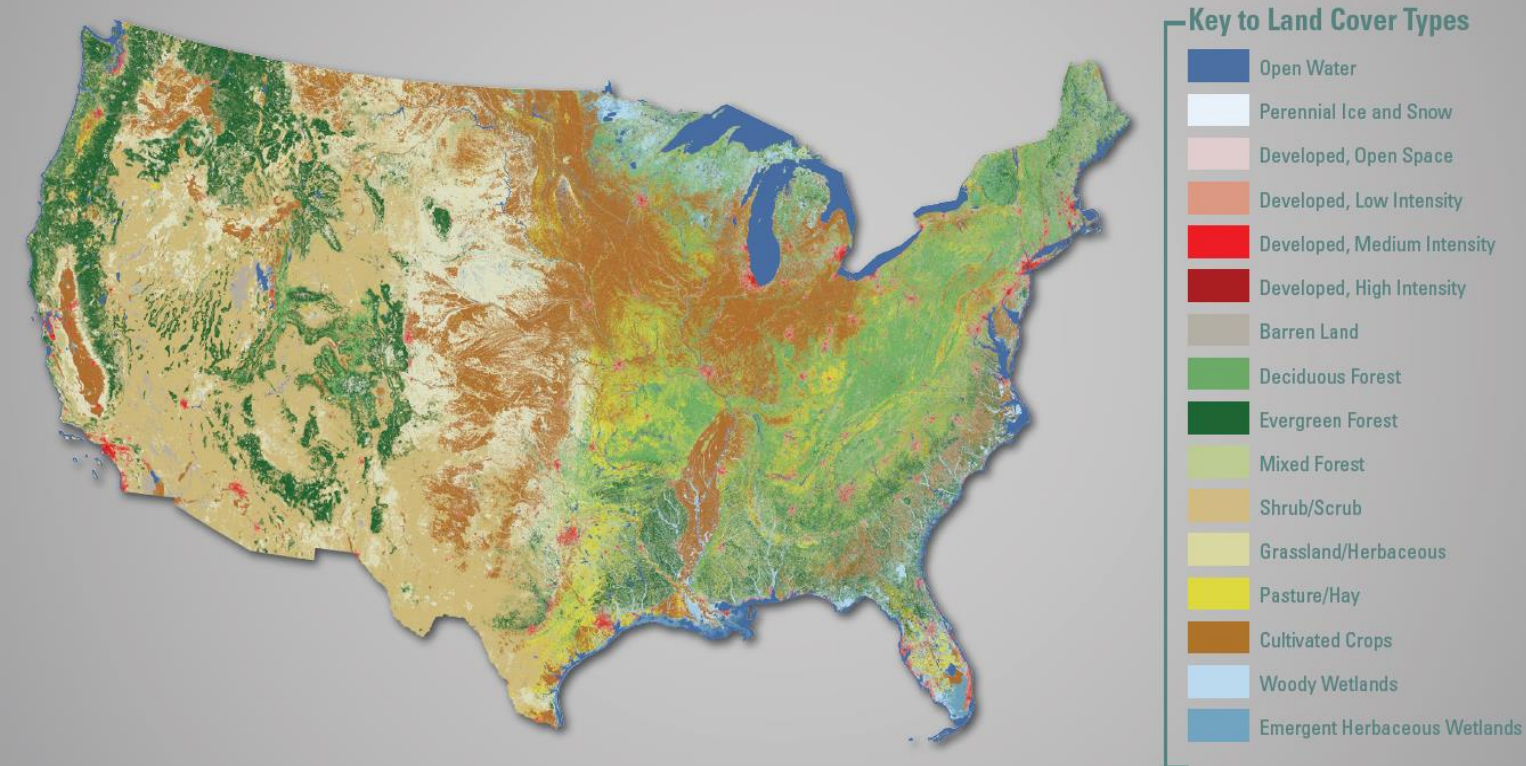


NASA “Landsat’s Next Chapter” Video

<https://svs.gsfc.nasa.gov/14262>

New National Land Cover Database Released!

National Land Cover Database (NLCD) 2021: Conterminous U.S. Land Cover



National Land Cover Database (NLCD) 2021 Released!

- Released July 31, 2023
- Product suite includes land cover, change, disturbance, and urban imperviousness at 30-meter spatial resolution
- Most widely used and cited national scale land cover data product for environmental monitoring, modeling, and land management
- NLCD 2021 characterizes land change from 2001 to 2021 (*Previous NLCDs: 2001, 2004, 2006, 2008, 2011, 2013, 2016, and 2019*)
- Moving towards the next-generation land cover and change product suite ***Land Cover Next (LC Next)***

EROS 50th Anniversary - Rollup

August 17-19, 2023

- Thursday: SF Chamber Ribbon Cutting (221)
- Friday: Re-dedication (291 guests)
- Saturday: Friends & Family (545 gate total)
 - Celebration Ceremony (461)
 - Tours (312)
 - Alumni Presentations
 - AmericaView Family Activities
 - Science Talks
 - Poster session

Media

- All local TV affiliates
- Three print outlets
- Five online services

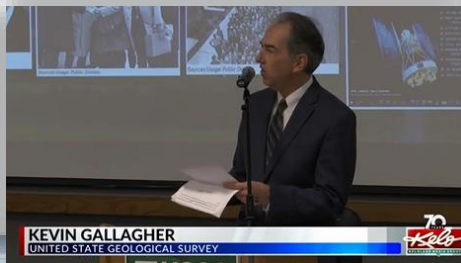
EROS



50 YEARS EXPLORING OUR PLANET



"To a generation of scientists who will be picking up the torch when our time has come to lay it down, I'm encouraged and excited about what the future holds for EROS and the USGS in the next decades"
David Applegate



"It's very evident that the work that the Landsat program is doing is saving lives and having a tremendous impact on our entire world."
Paul TenHaken, Mayor of Sioux Falls, SD



2030 Challenge – Seeking LAG Endorsement

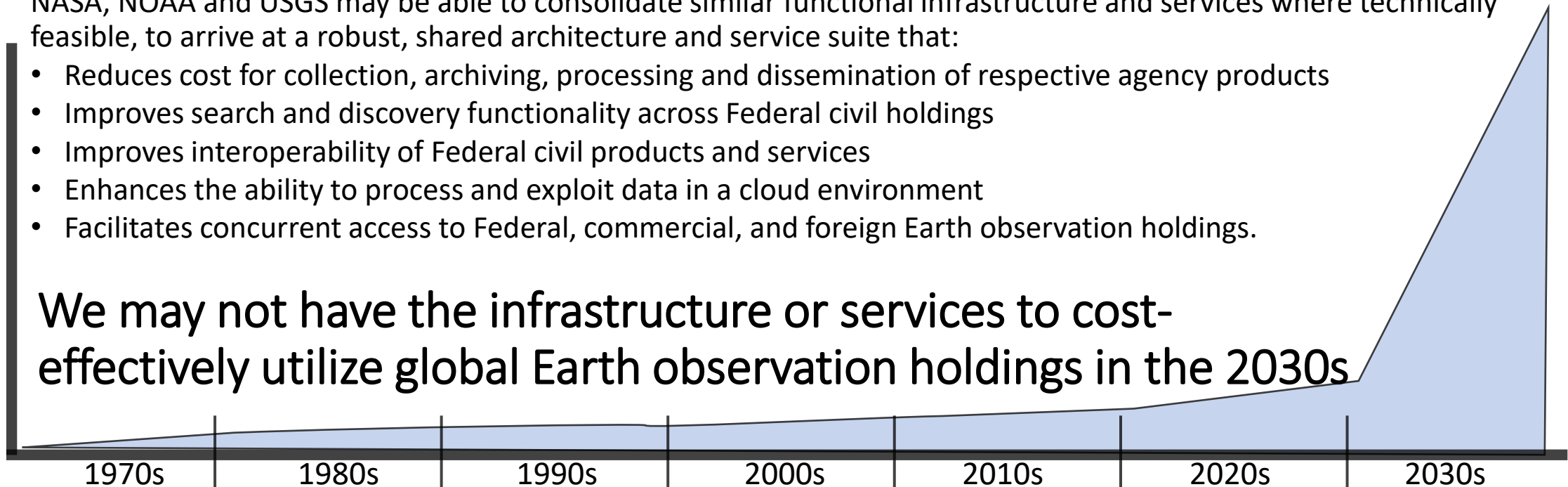
Historically, NASA, NOAA, and USGS have largely worked independently to develop and operate their individual systems for collecting, archiving, processing, and distributing Earth observation data, as well as for conducting satellite flight operations.

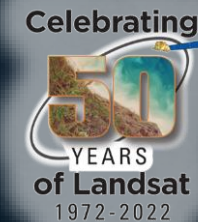
With data collection expected to grow by more than an order of magnitude by 2030, it is timely to examine the efficacy of moving to a multiagency Earth observation space system architecture to potentially realize operational efficiencies and cost savings.

NASA, NOAA and USGS may be able to consolidate similar functional infrastructure and services where technically feasible, to arrive at a robust, shared architecture and service suite that:

- Reduces cost for collection, archiving, processing and dissemination of respective agency products
- Improves search and discovery functionality across Federal civil holdings
- Improves interoperability of Federal civil products and services
- Enhances the ability to process and exploit data in a cloud environment
- Facilitates concurrent access to Federal, commercial, and foreign Earth observation holdings.

We may not have the infrastructure or services to cost-effectively utilize global Earth observation holdings in the 2030s





LANDSATNEXT

Thank You!

NASA "Landsat's Next Chapter" Video <https://svs.gsfc.nasa.gov/14262>



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